## NOTES ON COCCIDAE OCCURRING IN THE SEYCHELLES ISLANDS', WITH DESCRIPTIONS OF NEW SPECIES.

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The new species, described below, have been received from Mr. R. Dupont, Superintendent of Botanic Stations in the Seychelles.

Aspidiotus (Chrysomphalus) ansei, sp. nov. (fig. 1).
Female puparium irregularly circular or broadly ovate; flattish or moderately convex. Very pale brownish ochreous, semitransparent; pellicles darker, central. Diameter averaging 1.45 mm .

Male puparium smaller and more distinctly ovate ; pellicle nearer one extremity.. Length 1 mm .


Fig. 1. Aspidiotus ansei, Green, sp.n.; pygidium of adult $\uparrow$, $\times 280$.

Adult female broadly rounded in front, narrowed and bluntly pointed behind. Margins of abdominal segments moderately produced. Pygidium (fig. 1) with six well developed prominent rounded lobes, the median pair indented on each side, the two lateral lobes more conspicuously indented on the outer side. Squames. long and deeply fimbriate : two in each of the median and first lateral spaces, three in the second lateral space, and three beyond the outer lateral lobe, followed immediately by a stout marginal prominence, beyond which the margin is slightly cristatefor a short distance. Spines few, small and inconspicuous. Paraphyses, four on each side, elongate, conspicuous. Anal orifice near the extremity. Circumgenital glands in four groups : upper laterals with 3 to 4 pores, lower laterals with 2 to 3 . Oval dorsal pores in two series on each side. Numerous long slender ducts communicating with the dorsal and marginal pores. Length, 1 mm .

Nymphal pellicle indented at each side between the cephalic and thoracic areas. Pygidium with five conspicuous elongate paraphyses on each side. Length, 0.65 to 0.7 mm .

Crowded on fronds of Cocos nucifera. Anse aux Pins, Seychelles.
Gymnaspis grandis, sp. nov. (fig. 2).
Female puparium (fig. 2, a) consisting of the naked nymphal pellicle, which is approximately hemispherical, jet black and highly polished. Diameter, $1 \% \mathrm{~m} \mathrm{~mm}$.

|Fig. 2. Gymnaspis grandis, Green, sp. n.; a, group of puparia, nat. size:
$b$, adult $9, \times 30 ; c$, pygidium of adult ㅇ, $\times 280$;
$d$, posterior margin of nymphal pellicle,,$\times 135$; $e$, posterior margin of embryonic larva, $\times 280$.

Adult female (fig. $2, b$ ) circular, the pygidium slightly projecting. Rostrum large, densely chitinous. Pygidium (fig. 2, c) with posterior margin quite simple, devoid of lobes, spines or processes of any kind: a moderately deep median marginal indentation. Anal orifice near the extremity. Genital orifice covered by a chitinous fold. There are no eircumgenital glands or pores of any kind. Diameter of female (under compression) $1 \cdot 25$ to 1.5 mm .

Posterior extremity of nymph (fig. $2, d$ ) with four small simple lobes which searcely project beyond the margin but are extended inwards, disposed close together. Outside the lobes, on each side, are two large, deep and conspicuous clefts, which probably represent modified marginal pores.

Posterior extremity of embryonic larva (fig. $2, e$ ) with two lobes, on each side of which is a single deep cleft. Length of embryo, 0.5 mm .

On fruit of "Coco de Mer" (Lodoicea sechellarum). Praslin, Seychelles.
Lepidosaphes duponti, sp. nov. (fig. 3).
Puparium of female (fig. 3, a) ochreous brown to dark brown. The older (and darker) examples have the median longitudinal area flattened or even slightly concave, the depressed area bordered on each side by a more or less well marked ridge which is usually of a deeper colour than the other parts of the seale. Ontside this ridge the sides fall away sharply and then expand into a narrow flattened margin. Other


Fig. 3. Lepidosuphes duponti, Green, sp. n.; "t, puparium cf + , $\times 15$; $b$, pygidium of adult ㅇ, $\times 280$.
examples do not show this marked depression, but the darker lateral bands are indicated. The form may be approximately straight, or varionsly curved and contorted. Length, 25 to 3 mm . Greatest breadth approximately 1 mm .

Male puparium paler, with traces of lateral darker bands : no median depression. Length, 1.5 mm .

Adult female of normal form : broadest across the base of the abdomen. Lateral margins of abdominal segments moderately produced. Marginal area of metathorax and abdomen with numerous small dorsal pores which are more thickly disposed on the first two segments of the abdomen. Pygidium (fig. $3, b$ ) with well developed median and first lateral lobes, the latter being duplex, the inner lobule large and broadly expanded, the outer lobule small and narrow. A broad cristate prominence on each side, shortly beyond the lateral lobes. Pointed tubular squames in the usual (C288)
positions. Circumgenital glands in five groups: median group with from 3 to 5 pores (usual number 4), upper laterals 6 to 9 (average 8), lower laterals 7 to 9 (average 8). Length averaging 1.25 mm .

On leaf stalks of Coconut Palm. Silhouette, Seychelles.
The species is characterized by the exceptionally large inner lobule of the duplex lateral lobes, which equals the median lobes in size. I am not sure if the depression of the female puparium is a normal character, or whether it has been caused by pressure between adjacent leaf stalks. It was noticeable that the flattened examples were grouped at the lower end of the stalk.

Since the publication (in Trans. Limn. Soc. Lond., xii, part 2, p. 197, 1907) of a list of Coccidae occurring in the Seychelles, the following species have been identified in collections received from Mr. Dupont:-

Lecanium mangiferae, Green : on Cimnamon and imported Mango plants.
Aspidiotus dictyospermi pinnulifera, Mask. : on Jasminum, Thunbergia, Pandanus and Coconut.

Aspidiotus bromeliae, Newst. : on Pine-apple plants.
Aspidiotus ansei, Green : on Cocos mucifera.
Ischnaspis filiformis, Dougl. : on Oil Palm.
Gymnaspis grandis, Green : on Lodoicea (Coco de Mer).
Parlatoria pergandei, Comst. : on Thunbergia.
Lepidosaphes duponti, Green: on Cocos nucifera.
The list of species recorded from these islands is still a very small one, and the number of genera represented is extraordinarily poor. It includes Icerya (1 sp.), Aslerolecanium (2), Pseudococcus (2), Pulvinaria (2), Ceroplastes (1), Vinsonia (1), Lecanium (7), Chionaspis (1), Hemichionaspis (2), Diaspis (1), Aspidiotus (8), Lepidosaphes (4), Ischnaspis (1), Gymmaspis (1) and Parlatoria (1); a total of 15 genera and 35 species only. Such widely distributed genera as Orthezia, Antonina, Eriococcus and Fiorinia, are as yet unrepresented.

